



SEMINAR

SCHOOL OF MATHEMATICS AND
STATISTICS

DATE: 4 SEPTEMBER 2019

TITLE

T-duality - past, present and future

VENUE | TIME

Seminar Room I
11:30 AM –12:30 PM

SPEAKER

Prof. Peter Bouwknegt,
Director,
ANU Mathematical Sciences Institute, Australia.

ABSTRACT

In this talk, Prof Bouwknegt will review a geometric analogue of the Fourier transform, which arises in String Theory under the name of T-duality. In particular, he will discuss global aspects of T-duality and mention some recent generalisations. T-duality has important applications in different areas of mathematics, such as in differential geometry, algebraic topology, operator algebras, noncommutative geometry, as well as in physics.

ABOUT THE SPEAKER

Professor Peter Bouwknegt studied theoretical physics and mathematics at the University of Utrecht Netherlands, under the supervision of Professor G 't Hooft (Nobel Prize for Physics 1999), and at the University of Amsterdam under Professor FA Bais. He obtained his PhD in 1988. He then spent several years as a postdoctoral fellow at MIT, CERN and the University of Southern California before settling in Australia in 1995. He spent almost 10 years at the University of Adelaide, first as an ARC QEII Fellow and subsequently as an ARC Senior Research Fellow, before being appointed Professor of Theoretical Physics & Mathematics at ANU in 2005.

He is a recipient of the 2001 medal of the Australian Mathematical Society, and an expert on the mathematical foundations of string theory and conformal field theory. He served on the Australian Research Council's College of Experts from 2009–2011, the ERA-REC in 2012 and is the Director of the Mathematical Sciences Institute.